APPENDIX 5-7

LILA CANYON MINE

ROCK SLOPE MATERIAL
(Refuse Pile)

Some of the Information for Appendix 5-7 is hard copies. Electronic copies do not exist for all information contained within the Appendix.

Appendix 5-7
Refuse Pile

General

The proposed Lila Canyon Mine includes a site and plan for permanent disposal of coal refuse, as shown on Plate 5-2. Although washing of coal is not proposed, it is likely that some coal processing waste will be generated by the operation of the screening plant and from the mine itself. Additional rock slope material (refuse) will be generated by the construction of the rock slopes.

Since coal washing is not proposed, the refuse will not contain consolidated reject, which is higher in sulfur. The refuse pile is completely incised and will be compacted and covered with 4' of material. Thus eliminating the potential of water percolation causing problems. Drainage over the compacted pile with 4' of cover will be diverted into the sediment pond.

The rock slope work will generate approximately 16,650 bank cubic yards of underground development waste. Using a 1.5 bulking or swell factor, the total amount of loose yard of rock slope material to be disposed of in the refuse area is estimated to be 25,000 yd^3. See Figure 1, Appendix 5-7 for cross sections of the refuse area and Table 1 for potential refuse storage volumes.

The amount of coal processing waste will be generated by the operation of the screening plant and from the mine itself. The amount of coal processing waste or refuse expected to be generated by this operation is difficult to predict but expected to be very insignificant.

The shop/warehouse will be constructed on the material removed from the rock slopes which will contain a very insignificant amount of coal, if any. Under no circumstances will the material removed from the rock slopes contain enough combustibles to induce or continue combustion. In addition the material will be covered with four feet of compacted incombustible material making the fire hazzard to the shop/warehouse non existing.

Table 1
Lila Canyon Mine
Rock Slope - Refuse Storage Area

X-Section	Topsoil Ft2	Cover Material Ft2	SlopeRock or Refuse Ft2	Topsoil VolumeYd3 to Pile	Cover Material Volume Yd3	SlopeRock or Refuse Yd3	Total Top Soil to Pile Yd3	Total Cover Material	Total Refuse
4+00	0	0	0						
5+00	180	300	776	333.33	555.556	1437.04	333.3	555.6	1437
6+00	315	475	1482	916.67	1435.19	4181.48	1250	1991	5619
7+00	312	545	1405	1161.1	1888.89	5346.3	2411	3880	10965
8+00	487	700	2512	1479.6	2305.56	7253.7	3891	6185	18219
9+00	469	787	3057	1770.4	2753.7	10313	5661	8939	28531
10+00	439	787	2766	1681.48	2914.81	10783.3	7343	11854	39315
11+00	0	0	0	812.963	1457.41	5122.22	8156	13311	44437

NOTE:

Gray area depicts the area of rock slope material. The remainder has been designated for coal processing waste.

As can be seen by Table 1 the area identified for refuse disposal is large enough to dispose of approximately 44,437 yd^3 of material. The rock slope material is expected to take up approximately 25,000 leaving approximately 19,500 yd^3 capacity for future underground mine waste and coal processing waste production.

The disposal site will be comprised of two separate sections. The first section (Structural Fill) will be comprised of rock from the rock slopes and will not contain any coal. The Structural Fill site will not require an MSHA number. The second section (Refuse Site) will be for the disposal of coal mine waste.

The following sections will describe the ground preparation, refuse placement, and reclamation procedures for the refuse area. All the refuse will be placed in an incised area.

Ground Preparation

Vegetation and topsoil will be removed from the proposed refuse site and stored in the topsoil pile as shown on Plate 5-2 and Figure 1, Appendix 5-7. Subsoil will then be removed from the area as shown on Figure1. The subsoil will be pushed to the side using the blade of a caterpillar. The hole that is made by pushing the subsoil to the side will be filled by refuse material, either from the rock slope development and or coal processing waste or underground development waste as per Figure 1.

Placement of Refuse

Refuse will be dumped into the hole created from the removal of the subsoil. The refuse will be placed in the hole as per Figure 1. The refuse will be placed in 12" lifts and compacted using a front end loader. Once the hole is filled to the level shown in Figure 1 the subsoil will then be placed over the top of the refuse in 12" lifts and compacted with a front end loader, then another hole will be constructed by removing subsoil adjacent to the previous hole. The topsoil removal and storage, subsoil removal, hole being filled with refuse, and subsoil replacement, procedure will be repeated as additional refuse disposal area is needed.

The dumping (placing) of refuse into a prepared hole is NOT the same as "end dumping". End Dumping is defined by the Bureau of Mines as "Process in which earth is pushed over the edge of a deep fill and allowed to roll down the slope."

Refuse Testing

Material from the rock slope portals will be tested five times during their development. The first test will be during the initial startup of the rock slopes. The second, third and fourth tests will be when the development reaches 1/4, ½, and 3/4 of the construction phase. The last test will be taken near the completion of the project.

Material placed in the refuse pile from normal mining operations will be tested approximately every 6,000 tons. Testing parameters for the rock slope material and normal mining refuse will be as per Table 2.

Spreading and Compaction

Compaction will take place using a wheeled loader during the filling operation. Upon final reclamation the topsoil will be redistributed over the refuse storage area and reclaimed as per chapter 3. The total cover over the refuse area when considering the subsoil and topsoil will be a minimum of 4'.

Pile Configuration and Drainage

The hole for the refuse will be filled with refuse. The subsoil will be redistributed and graded to allow drainage and prevent impoundment of water on the pile. Runoff from the refuse pile will drain to the sediment pond as shown on Plate 7-5. A berm will be placed along the perimeter of the pile to direct runoff into the Sediment Pond.

A projected plan and section view of the refuse disposal area is shown on Figure 1 of this Appendix.

Site Inspection

The refuse disposal area will be inspected under the supervision of a qualified registered professional engineer during construction; this will continue until the area has been graded, covered, and reseeded. Inspections will include observations of any potential safety hazards, to assure that organic material and topsoil is removed before deposition and that construction and maintenance are being performed in accordance with the design plan.

If such inspection discloses a potential hazard, the inspector will immediately notify the regulatory authority of the hazard and the emergency procedures to be implemented.

Copies of the inspection reports will be maintained and available for review.

Reclamation

Upon completion of operation, the topsoil will be redistributed over the previously placed subsoil. Finally, the refuse area will be covered with topsoil and seeded according to the approved plan. Runoff from the reclaimed refuse pile area will continue to flow to the sediment pond until Phase II Bond Release requirements for the reclaimed site are met.

Factor of Safety

Since the pond is incised it is impossible to have a slope failure. Therefore, a safety factor calculation would be of no use. The factor of safety would be infinite.

TABLE 2

Rock Slope Material

List of
Test Parameters for Acid & Toxic Material
(As per personal conversation with Priscilla 12/29/04)

Ph
EC
SAR
Available Boron
Soluble Selenium
Acid Base Potential
Texture
Water Holding Capacity
Total Nitrogen
Nitrate as Nitrogen
% Organic Carbon